

**REMARKS**

Claims 28-54 are pending. Claim 35 has been amended.

Claims 34 and 35 were rejected under 35 USC §112, second paragraph, as being indefinite. The Examiner highlights that claim 34 refers to a "second optical guiding layer." However, claim 34 had previously been amended to delete reference to "second". Thus, this portion of the rejection has been overcome.

The Examiner notes that claim 35 refers to "said first optical guiding layer." Claim 35 has been amended to delete the term "first".

Lastly, the Examiner notes that claim 35 refers to "said third clad." However, the prior amendment had deleted reference to the third cladding layer. Accordingly, it is believed that the amended claims are in full compliance with 35 USC §112.

Claims 38-40 and 49 were rejected under 35 USC §102(b) as being anticipated by Meliga. Favorable reconsideration of this rejection is earnestly solicited.

It is respectfully submitted that Meliga fails to anticipate the claims for the following reasons:

- (1) In claim 38, the strained active layer is formed only at the bottom of the V-groove. On the other hand, in Fig. 1 of Meliga, a layer 6 made of an optically passive material is formed at first at the bottom of the groove and a plurality of active layers (optically active materials) 5 are formed discontinuously from the bottom of the groove to the top.
- (2) In claim 38, the active layer is turned into a strained active layer. On the other hand, in Meliga, description is given on the laser of GaAs/GaAlAs. GaAs referred to as a quantum wire (active layer) and GaAlAs alloy as the strained material is the grating 2. There is no description on

the feature that the active layer is used as the strained active layer.

(3) In claim 39, clad layers are formed on an inner side and an outer side of the V-groove, and the active layer is sandwiched between them. On the other hand, in Fig. 1 of Meliga, a layer 6 made of optically passive material is provided on the inner side of the V-groove, and a grating 2 made of optically passive material is provided on the outer side of the V-groove. Further, light is propagated in a horizontal direction with respect to the paper surface. Thus, it is difficult to consider that the layer 6 and the grating 2 are the layers which fulfill the function as clad layers.

(4) In claim 49, it is described that the V-groove is formed by vapor phase etching. When the V-groove is formed by vapor etching, the tip of the V-groove will be made sharper compared with the case where wet etching is used. On the other hand, in Meliga, the method to form the groove is not clearly disclosed, while it is described that photo resist is used for etching (column 5, lines 40-59). Further, the groove is not an accurately formed V-groove, and it is described that there is non-zero width in the range corresponding to the vertex (column 4, lines 60-66). Therefore, it is very likely that it is formed by wet etching.

(5) Claim 49 depends from claim 43. Thus, it appears that claim 49 should not have been included in the rejection.

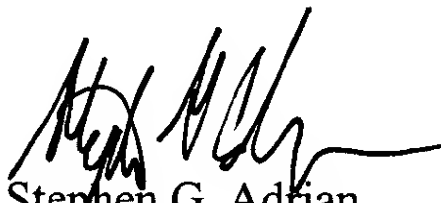
For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

Should the Examiner deem that any further action by Applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone Applicants' undersigned attorney.

In the event that this paper is not timely filed, applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper, may be charged to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



Stephen G. Adrian  
Attorney for Applicants  
Reg. No. 32,878

Attachment: Petition for Extension of Time

SGA/arf  
Atty. Docket No. **950971B**  
Suite 1000  
1725 K Street, N.W.  
Washington, D.C. 20006  
(202) 659-2930



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